

## REMARKS

The Examiner's office Action of January 3, 2003 has been received and its contents reviewed. Applicants would like to thank the Examiner for the consideration given to the above-identified application.

Claims 15-28 and 43-52 have been withdrawn from consideration. Accordingly, claims 1-14 and 29-42 are pending for consideration, of which claims 1, 8, 22, 29, and 36 are independent. In view of the following remarks, reconsideration of this application is now requested.

Referring now to the detailed Office Action, claims 1-14 and 29-42 stand rejected under 35 U.S.C. §102(e) as anticipated by Yamazaki et al. (U.S. Patent No. 6,087,679 – hereafter Yamazaki). This rejection is respectfully traversed at least for the reasons provided below.

The present invention relates to a semiconductor device that comprises a crystalline semiconductor film that contains silicon and germanium and a channel formation region.

As recited in independent claims 1, 8, 22, 29, and 36, 20% or more of the channel formation region is the {101} lattice plane that forms an angle of equal to or less than 10 degrees with respect to the surface of the crystalline semiconductor film; 3% or less of the channel formation region is the {001} lattice plane that forms an angle of equal to or less than 10 degrees with respect to the surface of the crystalline semiconductor film; and, 5% or less of the channel formation region is the {111} lattice plane that forms an angle of equal to or less than 10 degrees with respect to the surface of the crystalline semiconductor film.

As described in second paragraph, page 28, for example, of the specification of the present application, in order to enhance the ratio of the {101} lattice plane orientation in the crystalline semiconductor film, the present invention has found a measure of putting limitations on the rotation direction of the pillar-like crystal to reduce the degree of freedom; namely to make the amorphous silicon contain 0.1 to 10 atomic percent of germanium.

With respect to the §102(e), the Examiner asserts that Yamazaki discloses silicon containing 1-10% of germanium. Specifically, column 18 of the reference to Yamazaki recites “a silicon film containing germanium at 1-10%”. However, Applicants respectfully assert that

Yamazaki does not suggest that an amorphous silicon contains 0.1 to 10 atomic percent of germanium, and that Yamazaki merely describes that a silicon film contains germanium at 1-10% in column 18. In other words, an amorphous silicon film containing germanium at 1-10% is not disclosed by Yamazaki.

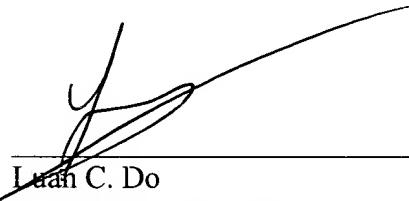
Consequently, since each and every feature of the present claims is not taught (and is not inherent) in the teachings of Yamazaki, as is required by MPEP Chapter 2131 in order to establish anticipation, the rejection of claims 1-14 and 29-42, under 35 U.S.C. §102(e), as anticipated by Yamazaki is improper.

With respect to the Examiner's assertion that it is inherent that 20% or more of the channel region is the {101} lattice plane, that 3% or less of the channel formation region is the {001} lattice plane, and that 5% or less of the channel formation region is the {111} lattice plane, Applicants respectfully submit that, as Yamazaki fails to disclose an amorphous silicon film containing germanium at 1-10%, Yamazaki cannot teach the aforementioned features. Should the Examiner still maintain reliance on "inherency" or take official notice in the §102(e) rejection, the Examiner is respectfully requested to provide support for this assertion in accordance with MPEP 2144.03 (pp. 2100-129 and 2100-130, Aug. 2001) and with the Memorandum from the Deputy Commissioner for Patent Examination Policy, Steve Kunin, which is titled *Procedures for Relying on Facts Which are Not of Record as Common Knowledge or for Taking Official Notice*.

In view of the arguments set forth above, Applicant respectfully requests reconsideration and withdrawal of all the pending §102(e) rejection.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise which could be eliminated through discussions with Applicants' representative, then the Examiner is invited to contact the undersigned by telephone in order that the further prosecution of this application can thereby be expedited.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'Luan C. Do', is written over a horizontal line. The signature is stylized with a large, sweeping 'L' and a cursive 'C'.

Luan C. Do  
Registration No. 38,434

NIXON PEABODY LLP  
8180 Greensboro Drive, Suite 800  
McLean, VA 22102  
(703) 770-9300